

Administration, 400 Seventh Street, SW., Washington, DC 20590. All information provided this agency in accordance with this section will be placed in the public docket.

(2) Each manufacturer of wheels shall provide an explanation of its date of manufacture symbol to any person upon request.

Issued on August 27, 1993.

Barry Felrice,

Associate Administrator for Rulemaking.

(FR Doc. 93-21332 Filed 9-2-93; 8:45 am)

BILLING CODE 4910-59-M

## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

RIN 1018-AB97

#### Endangered and Threatened Wildlife and Plants; Proposal To List the Appalachian Elktoe as an Endangered Species

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

**SUMMARY:** The U.S. Fish and Wildlife Service (Service) proposes to list the Appalachian elktoe (*Alasmidonta raveneliana*) as an endangered species under the Endangered Species Act of 1973, as amended (Act). The Appalachian elktoe is a freshwater mussel that is endemic to the upper Tennessee River system in the mountains of western North Carolina and eastern Tennessee. It was once fairly widely distributed in western North Carolina but has been eliminated from the majority of its historic range and reduced to short reaches of the Little Tennessee River, Nolichucky River, North Toe River, and Cane River. In Tennessee, the species is known only from its present distribution in the Nolichucky River. The species' range has been seriously reduced by impoundments and the general deterioration of habitat and water quality resulting from siltation and other pollutants contributed by poor land use practices and toxic discharges. Due to the species' limited distribution, any factors that adversely modify habitat or water quality in the stream reaches it now inhabits could further threaten the species. Comments and information pertaining to this proposal are sought from the public.

**DATES:** Comments from all interested parties must be received by November 2,

1993. Public hearing requests must be received by October 18, 1993.

**ADDRESSES:** Comments and materials concerning this proposal should be sent to the Field Supervisor, U.S. Fish and Wildlife Service, 330 Ridgefield Court, Asheville, North Carolina 28805.

Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

**FOR FURTHER INFORMATION CONTACT:** Mr. John Fridell at the above address (telephone 704/665-1195, Ext. 225).

#### SUPPLEMENTARY INFORMATION:

##### Background

The Appalachian elktoe (*Alasmidonta raveneliana*) was originally described by Lea (1834). This freshwater species has a thin but not fragile, subovate or kidney-shaped shell, reaching up to about 80 mm in length, 35 mm in height, and 25 mm in width (Clarke 1981). Juveniles of the species generally have a yellowish-brown periostracum (outer shell surface) while the periostracum of the adults is usually dark brown in color. Although rays are prominent on some shells, particularly in the posterior portion of the shell, many individuals have only obscure greenish rays. The shell nacre (inside shell surface) is shiny, often white to bluish-white, changing to a salmon, pinkish, or brownish color in the central and beak cavity portions of the shell; some specimens may be marked with irregular brownish blotches (adapted from Clarke 1981). A detailed description of the species' shell, with illustrations, is contained in Clarke (1981). Soft parts are discussed in Ortmann (1921).

Because of its rarity, little is known about the specifics of the biology, habitat requirements, and life history of the Appalachian elktoe. The species has been reported from relatively shallow, medium-sized creeks and rivers with cool, moderate- to fast-flowing water. It has been observed in gravelly substrates often mixed with cobble and boulders, in cracks in bedrock (Gordon 1991), and occasionally in relatively silt-free, coarse, sandy substrates (J. Alderman, North Carolina Wildlife Resources Commission, personal communication, 1992; personal observations, 1989 and 1991). Like other freshwater mussels, the Appalachian elktoe feeds by filtering food particles from the water column. The specific food habits of the species are unknown, but other freshwater mussels have been documented to feed on detritus, diatoms, phytoplankton, and zooplankton (Churchill and Lewis 1924). The reproductive cycle of the

Appalachian elktoe is similar to that of other native freshwater mussels. Males release sperm into the water column; the sperm are then taken in by the females through their siphons during feeding and respiration. The females retain the fertilized eggs in their gills until the larvae (glochidia) fully develop. The mussel glochidia are released into the water, and within a few days they must attach to the appropriate species of fish, which they then parasitize for a short time while they develop into juvenile mussels. They then detach from their "fish host" and sink to the stream bottom where they continue to develop, provided they land in a suitable substrate with the correct water conditions. The mussel's life span, fish species its larvae parasitize, and many other aspects of its life history are unknown.

The Appalachian elktoe is known to be endemic to the upper Tennessee River system in western North Carolina and eastern Tennessee. Historical records for the species in North Carolina exist for the Nolichucky River system (Nolichucky River, county unknown); the Little Tennessee River system (Tulula Creek, Graham County); and the French Broad River system, including the Little River (Transylvania County), Swannanoa River (county unknown), Pigeon River (Haywood County), and French Broad River (Buncombe County and an unknown county) (Clarke 1981). An additional historical record of the Appalachian elktoe in the North Fork Holston River, Tennessee (S.S. Haldeman collection) is believed to represent a mislabeled locality (Gordon 1991).

From 1986 through the spring of 1992, biologists with the Service, Tennessee Valley Authority, North Carolina Wildlife Resources Commission, and Tennessee Technological University surveyed both historic and potential habitat of the species. Surveys of the French Broad River and its tributaries in North Carolina failed to locate any specimens of the Appalachian elktoe (R. Biggins, U.S. Fish and Wildlife Service, personal communications, 1989 and 1991; Alderman, North Carolina Wildlife Resources Commission, personal communication, 1990; M. Gordon, Tennessee Technological University, personal communications, 1991 and 1992; personal observations, 1986 through 1991). The species has also been extirpated from Tulula Creek in the Little Tennessee River system (personal observations, 1987 and 1992) and could not be found in any of the other major tributaries to the Little Tennessee River (Gordon, personal communication, 1991; S. Ahlstedt,

Tennessee Valley Authority, personal communication, 1992).

Only two populations of the species are known to survive. One population, discovered in 1987 by Tennessee Valley Authority biologists (Steven Ahlstedt and Charles Saylor), exists in the main stem of the Little Tennessee River in Swain and Macon Counties, North Carolina (Tennessee Valley Authority 1987; J. Widlak, U.S. Fish and Wildlife Service, personal communication, 1988; Biggins 1990; Gordon 1991; personal observations, 1988, 1991, and 1992). In the Nolichucky River system, the species is restricted to scattered locations along a short reach of the North Toe River in Yancey and Mitchell Counties in North Carolina (personal observations, 1991 and 1992) and the main stem of the Nolichucky River, Yancey and Mitchell Counties, North Carolina (Alderman, personal communication, 1991; personal observation, 1992), extending downriver into Unicoi County, Tennessee (personal observation, 1992). A single specimen of the Appalachian elktoe was also found in the Cane River in Yancey County, North Carolina (C. McGrath, North Carolina Wildlife Resources Commission, personal communication, 1992).

Habitat and water quality degradation/alteration resulting from impoundments, stream channelization, dredging, industrial and sewage effluent, and the runoff of silt and other pollutants from poorly implemented mining, construction/development, agricultural and past logging activities are believed to be the primary factors resulting in the elimination of the species from the majority of its historic range. Many of these factors threaten the only two remaining populations of the species.

The Appalachian elktoe was recognized by the Service in the May 22, 1984, *Federal Register* (49 FR 21675) and again in the January 6, 1989, *Federal Register* (54 FR 579) as a species being reviewed for potential addition to the Federal List of Endangered and Threatened Wildlife and Plants. This mussel was designated as a category 2 candidate for Federal listing on these candidate lists. Category 2 represents those species for which the Service has some information indicating that the taxa may be under threat, but sufficient information is lacking to prepare a proposed rule. Since that time, both historic and potential habitat of the species has been surveyed. Only two populations of the Appalachian elktoe are known to survive, and both of these populations are threatened by many of the same factors believed to

have resulted in the extirpation of the species elsewhere within its historic range. Accordingly, on June 10, 1992, the Service reclassified the Appalachian elktoe as a category 1 candidate. Category 1 represents those species for which the Service has enough substantial information on biological vulnerability and threats to support proposals to list them as endangered or threatened species.

The Service has met and been in contact with various Federal and State agency personnel and private individuals knowledgeable about the species concerning the species' status and the need for protection provided by the Act. On April 20, 1992, and again on August 21, 1992, the Service notified appropriate Federal, State, and local government agencies in writing that a status review was being conducted and that the species might be proposed for Federal listing. A total of six written comments were received on these two notices. The North Carolina Wildlife Resources Commission (two written comments), the North Carolina Natural Heritage Program (two written comments), and an interested biologist expressed their support for the species' being proposed for protection under the Act; the U.S. Soil Conservation Service stated that they did not have any additional information on this species. No negative comments were received.

#### Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in Section 4(a)(1). These factors and their application to the Appalachian elktoe (*Alasmidonta raveneliana*) are as follows:

##### A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

Historic and recent collection records for the Appalachian elktoe indicate that the species was once fairly widely distributed throughout the upper Tennessee River system in North Carolina, including the French Broad River system, the Little Tennessee River system, and the Nolichucky River system (Clarke 1981, Biggins 1990, and Gordon 1991). In Tennessee, the species is known only from its present distribution in the Nolichucky River.

The species apparently no longer exists in the French Broad River system, where it was once fairly widely distributed; and, with the exception of one small population each in the Nolichucky River system and the main stem of the Little Tennessee River, the species has been eliminated from these river systems as well. This decline in the species throughout its range has been attributed to several factors, including siltation resulting from mining, logging, agricultural, and construction activities; runoff and discharge of organic and inorganic pollutants from industrial, municipal, agricultural, and other point and nonpoint sources; habitat alterations associated with impoundments, channelization, and dredging; and other natural and human-related factors that adversely modify the aquatic environment. Many of these same factors threaten the two remaining populations of the species.

The Little Tennessee River population, the healthiest of the two remaining populations, inhabits a relatively short stretch of the river located between Emory Lake at Franklin, Macon County, North Carolina, and Fontana Reservoir in Swain County, North Carolina. This population was likely reduced in size by the impoundment of these two reservoirs and is presently being threatened by industrial and sewage effluent (primarily from the town of Franklin but also originating elsewhere within the river's watershed) and heavy silt loads and other pollutants (e.g., fertilizers, pesticides, heavy metals, oil, salts, organic wastes, etc.) from residential and industrial developments, road and highway construction/improvement projects, crop and livestock farming activities, and other land disturbance activities occurring throughout the river's watershed.

The Nolichucky River population appears to be restricted to scattered pockets along short reaches of the main stems of the Nolichucky, North Toe, and Cane Rivers. The primary threats to this population appear to be associated with the runoff or discharge of silt and other pollutants from surface-mining operations, construction projects, and a variety of agricultural activities occurring at numerous locations in the river's watershed. Much of the Nolichucky River in North Carolina contains heavy loads of sediments from past and ongoing land disturbance activities within its watershed, and suitable habitat for the Appalachian elktoe appears to be limited in this river. Also, because both extant populations of the Appalachian elktoe are restricted

to short river reaches, each is extremely vulnerable to extirpation from a single catastrophic event, such as a toxic chemical spill or an activity resulting in a major river channel/habitat modification.

#### *B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes*

This freshwater mussel species is not commercially valuable, but because it is extremely rare it could be sought by collectors. While collecting or other intentional take is not presently identified as a factor contributing to the species' decline, because the Appalachian elktoe is extremely restricted in range, such take could pose a significant threat to the species' continued existence if it should occur. Federal listing would help control any indiscriminate taking of individuals.

#### *C. Disease or Predation*

Since 1982, biologists and commercial mussel fishermen have reported extensive mussel die-offs in rivers and lakes throughout the United States. The cause(s) of many of these die-offs is unknown, but disease has been suggested as a possible factor.

Shells of the Appalachian elktoe are often found in muskrat middens along the reach of the Little Tennessee River where the species still exists and occasionally in middens along the Nolichucky River. The species also is presumably consumed by other mammals, such as raccoons and mink. While predation is not thought to be a significant threat to a healthy mussel population, it could, as suggested by Neves and Odum (1989), limit the recovery of endangered mussel species or contribute to the local extirpation of mussel populations already depleted by other factors. Predation would be of primary concern to the Nolichucky River population of the Appalachian elktoe, which appears to be existing only in low numbers.

#### *D. The Inadequacy of Existing Regulatory Mechanisms*

The States of North Carolina and Tennessee prohibit taking of fish and wildlife, including freshwater mussels, for scientific purposes without a State collecting permit. However, State regulations do not generally protect the species from other threats. The Little Tennessee River population of the species is indirectly provided some Federal protection from Federal actions and activities through the Endangered Species Act, due to the fact that at least a portion of this population inhabits the same stretch of river as the federally

threatened spotfin chub (*Cyprinella* (= *Hybopsis*) *monacha*) and the federally endangered little-wing pearly mussel (*Pegias fabula*). However, the Nolichucky River population of the species is not afforded this protection. Federal listing would provide additional protection for the Appalachian elktoe throughout its range by requiring Federal permits in order to take the species and by requiring Federal agencies to consult with the Service when activities they fund, authorize, or carry out may affect the species.

#### *E. Other Natural or Manmade Factors Affecting Its Continued Existence*

Only two populations of this species are known to still exist. Both are relatively small, particularly the Nolichucky River population, and they are geographically isolated from one another. This isolation prohibits the natural interchange of genetic material between populations, and the small population size reduces the reservoir of genetic variability within the populations. It is possible that both the remaining populations of the Appalachian elktoe may already be below the level required to maintain long-term genetic viability. Because they are isolated from one another, natural repopulation of an extirpated population would be impossible without human intervention.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to propose this rule. Based on this evaluation, the preferred action is to list the Appalachian elktoe (*Alasmidonta raveneliana*) as an endangered species. The species has been eliminated from the French Broad River system, and its range has been greatly reduced in the other two river systems (the Little Tennessee River and the Nolichucky River systems) in which the species historically occurred. Presently, only two small isolated populations are known to survive. These populations are threatened by a variety of factors, including road construction activities, residential and commercial development, mining activities, farming and logging activities, sewage and industrial effluent, and other manmade and natural factors adversely affecting the aquatic environment. Due to the species' history of population losses and the extreme vulnerability of the two surviving populations, endangered status appears to be appropriate for this species (see "Critical Habitat" section for a discussion of why critical habitat

is not being proposed for the Appalachian elktoe).

#### **Critical Habitat**

Section 4(a)(3) of the Act, as amended, requires that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. The Service's regulations [50 CFR 424.12(a)(1)] state that designation of critical habitat is not prudent when one or both of the following situations exist: (1) the species is threatened by taking or other activity and the identification of critical habitat can be expected to increase the degree of threat to the species or (2) such designation of critical habitat would not be beneficial to the species. The Service finds that designation of critical habitat is not prudent for this species. Such a determination would result in no known benefit to the Appalachian elktoe, and designation of critical habitat could further threaten the species.

Section 7(a)(2) and regulations codified at 50 CFR Part 402 require Federal agencies to ensure, in consultation with and with the assistance of the Service, that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species or destroy or adversely modify their critical habitat, if designated. Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in the destruction or adverse modification of proposed critical habitat. (See "Available Conservation Measures" section for a further discussion of Section 7.) As part of the development of this proposed rule, Federal and State agencies were notified of the Appalachian elktoe's general distribution, and they were requested to provide data on proposed Federal actions that might adversely affect the species. No specific projects were identified. Should any future projects be proposed in areas inhabited by this mussel, the involved Federal agency will already have the general distributional data needed to determine if the species may be affected by their action; and if needed, more specific distributional information would be provided.

Regulations promulgated for the implementation of Section 7 of the Act provide for both a "jeopardy" standard and a "destruction or adverse modification" of critical habitat standard. Due to the highly precarious status of the Appalachian elktoe, any

significant adverse modification or destruction of the species' habitat would also likely jeopardize the species' continued existence, thereby triggering both standards. Therefore, no additional protection for the mussel would accrue from critical habitat designation that would not also accrue from listing of the species. If the species is listed, habitat protection for the Appalachian elktoe will be accomplished through the Section 7 "jeopardy" standard and Section 9 prohibitions against take.

In addition, Appalachian elktoe is very rare, and taking for scientific purposes and private collection could pose a threat if specific site information were released. The publication of critical habitat maps in the **Federal Register** and local newspapers and other publicity accompanying critical habitat designation could increase the collection threat and increase the potential for vandalism during the often controversial critical habitat designation process. The locations of populations of this species have consequently been described only in general terms in this proposed rule. Any existing precise locality data would be available to appropriate Federal, State, and local government agencies from the Service office described in the "Addresses" section; from the Service's Raleigh Field Office, P.O. Box 33726, Raleigh, North Carolina 27636-3726; the Service's Cookeville Field Office, 446 Neal Street, Cookeville, Tennessee 38501, and from the North Carolina Wildlife Resources Commission, North Carolina Natural Heritage Program, Tennessee Wildlife Resources Agency, and Tennessee Department of Conservation.

#### Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing

this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in the destruction or adverse modification of proposed critical habitat. If a species is subsequently listed, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service.

The Service has notified Federal agencies that may have programs which could affect the species. Federal activities that could occur and impact the species include, but are not limited to, the carrying out or issuance of permits for reservoir construction, hydroelectric facilities construction and operation, river channel maintenance, stream alterations, mining activities, wastewater discharges, and road and bridge construction. It has been the experience of the Service, however, that nearly all section 7 consultations have been resolved so that species have been protected and the project objectives have been met.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, or collect; or to attempt any of these), import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes to enhance the propagation or survival of the species and/or for incidental take in connection with otherwise lawful activities.

#### Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned government agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

- (1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to this species;
- (2) The location of any additional populations of this species and the reasons why any habitat should or should not be determined to be critical habitat as provided by Section 4 of the Act;
- (3) Additional information concerning the range, distribution, and population size of this species; and
- (4) Current or planned activities in the subject area and their possible impacts on this species.

Final promulgation of the regulation on this species will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be received within 45 days of the date of publication of the proposal. Such requests must be made in writing and addressed to the Field Supervisor, U.S. Fish and Wildlife Service, Asheville Field Office, 330 Ridgefield Court, Asheville, North Carolina 28806.

#### National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to Section 4(a) of the Act. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

#### References Cited

- Biggins, R. G. 1990. *Alasmidonta raveneliana* (Lea 1834) Appalachian elktoe. In: A report on the conservation status of North Carolina's freshwater and terrestrial molluscan faunas. Prepared by North Carolina Scientific Council on Freshwater and Terrestrial Mollusks. 246 pp.
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Clarke, A. H. 1981. The Tribe Alasmidontini (Unionidae: Anodontinae), Part 1: *Pegias*, *Alasmidonta*, and *Arcidens*. Smithsonian Contributions to Zoology, 326:1-101.

Gordon, M. E. 1991. Species account for the Appalachian elktoe (*Alasmidonta raveneliana*). Unpublished report to The Nature Conservancy. 5 pp.

Lea, I. 1834. Observations on Naiades (etc.). Transactions of the American Philosophical Society, new series, 51:135-229, plates 1-19.

Neves, R. J., and M. C. Odum. 1989. Muskrat predation on endangered freshwater mussels in Virginia. Jour. Wildl. Manage. 53(4):939-940

Ortmann, A. E. 1921. The Anatomy of Certain Mussels from the Upper Tennessee. Nautilus, 34(3):81-91.

Tennessee Valley Authority. 1987. Fish Collection Report to the North Carolina Wildlife Resources Commission.

#### Author

The primary author of this proposed rule is John A. Fridell, U.S. Fish and Wildlife Service, Asheville Field Office, 330 Ridgefield Court, Asheville, North Carolina 28806 (704/665-1195, Ext. 225).

#### List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, and Transportation.

#### Proposed Regulation Promulgation

Accordingly, it is hereby proposed to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

#### PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500; unless otherwise noted.

2. It is proposed to amend § 17.11(h) by adding the following, in alphabetical order, under CLAMS, to the List of Endangered and Threatened Wildlife, to read as follows:

#### § 17.11 Endangered and threatened wildlife.

\* \* \* \* \*

(h) \* \* \*

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Clams							
Elktoe, Appalachian	<i>Alasmidonta raveneliana</i>	U.S.A. (NC, TN)	NA	E		NA	NA

Dated: August 12, 1993.

Richard N. Smith,

Acting Director, Fish and Wildlife Service.

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